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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,463

02/19/2008

David Elata

P-8471-US

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EXAMINER

BAYOU, AMENE SETEGNE

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

09/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,463	Applicant(s) ELATA ET AL.	
	Examiner AMENE S. BAYOU	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 21,22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/27/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/27/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Claims 11-20 are objected to because of the following informalities: Claim 11 recites "on a adjacent fluid" which should have been written as "on an adjacent fluid". Appropriate correction is required.. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. In re claim 10 it recites "at least some of the device" which is difficult to understand and confusing since claim 1 recites "a device". For purpose of examination we assume the applicant intends to mean "at least some part of the device" or "at least a part of the device".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claim 1-9,11-12 are rejected under 35 U.S.C 102(b) as being unpatentable over Perlov et al (US patent 4498850).

7. In re claim 1, Perlov et al disclose a pumping apparatus including:

- A device ,**in figure 1**,for inducing motion on fluids or solids, the device comprising: a structure with a **deformable sheet (8)** compressed to form a structural wave (**figure 3C**) ; and an actuator (**electromagnet belts 19-31;column 6,lines 13-21**) for actuating the **deformable sheet (8)** and driving the structural wave in a predetermined manner.

8. In re claim 2, Perlov et al disclose a pumping apparatus including:

- The **deformable sheet (8)** is a deformable plate, peripherally supported by a frame, **clearly shown in figure 2 and 4.**

9. In re claim 3, Perlov et al disclose a pumping apparatus including:

- The **deformable sheet (8)** is a beam (diaphragm 8 which is beam itself is supported at points 16 to form a beam structure; figure 4).

10. In re claim 4, Perlov et al disclose a pumping apparatus including:

- The beam (**which is diaphragm 8**) is coupled to an elastic foundation (**housings 2 and 4 are plastic; column 5, lines 10-11**).

11. In re claim 5, Perlov et al disclose a pumping apparatus including:

- A first wall is provided against the deformable sheet so as to define a **first conduit (6)** between the first wall and the **deformable sheet (8)**,**figure 4.**

12. In re claim 6, Perlov et al disclose a pumping apparatus including:

- The **first conduit (6)**is provided with an **inlet (44)** and an **outlet (50)** ,**figure 4 .**

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13. In re claim 7, Perlov et al disclose a pumping apparatus including:

- A second wall positioned opposite the first wall, with the **deformable sheet (8)** between the walls, the second wall defining a second conduit (**also called as 6; figure 1**) between the second wall and the **deformable sheet (8), figure 1**.

14. In re claim 8, Perlov et al disclose a pumping apparatus including:

- The (**also called as 6; figure 1**) is provided with **an inlet (46) and an outlet (48), in figure 4**.

15. In re claim 9, Perlov et al disclose a pumping apparatus including:

- The actuator (**electromagnet belts 19-31;column 6,lines 13-21**) is selected from the group consisting of electrostatic actuators, piezoelectric actuators, thermoelastic actuators and magnetic actuators.

16. In regards to the claims **11-12, 14-20**, Perlov et al disclose a method of inducing motion on fluids since under the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claims, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. In re King, 801 F.2d 1324,231 MPEP 2112.02”.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlov et al in view of Drevet (US patent 6659740).

19. In re claim 10 Perlov et al as applied to claim 1 disclose the claimed invention except the following limitation which is taught by Drevet: Drevet teach a similar diaphragm pump including:

- At least **a part (21)** of the device is made from silicon. It would have been obvious to one skilled in the art at the time the invention was made to modify the pump of Perlov et al by making the diaphragm from silicone as taught by Drevet in order to manufacture the device by photolithographic technique.

20. In re claim 13 Perlov et al as applied to claim 11 disclose the claimed invention except the following limitation which is taught by Drevet: Drevet teach a similar diaphragm pump including:

- The **deformable sheet (9)** is deformed using a peripherally **supporting frame (32, in figure 3 and column 4, lines 5-10)**. It would have been obvious to one skilled in the art at the time the invention was made to modify the pump of Perlov et al by using the support frame to induce motion to the diaphragm as

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taught by Derevet since the magnets can easily be attached to one side of the frame instead of distributing them around the whole length of the diaphragm.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amene S. Bayou whose telephone number is 571-270-3214. The examiner can normally be reached on Monday-Thursday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
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